

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/07605A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K39/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

WPI Data, EMBASE, EPO-Internal, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| Y | WO 98 33884 A (GRIFFITHS STEVEN GARETH ; SALONIUS KIRA (CA); AQUA HEALTH EUROPE LTD) 6 August 1998 (1998-08-06) the whole document | 7-14,21 |
| A | | 1-6, 15-20 |
| Y | KUZYK M A ET AL: "An efficacious recombinant subunit vaccine against the salmonid rickettsial pathogen <i>Piscirickettsia salmonis</i> " VACCINE, BUTTERWORTH SCIENTIFIC. GUILDFORD, GB, vol. 19, no. 17-19, 21 March 2001 (2001-03-21), pages 2337-2344, XP004231046 ISSN: 0264-410X | 7-14,21 |
| A | page 2342, left-hand column, paragraph 2 -page 2343, left-hand column, paragraph 3 | 1-6, 15-20 |
| | -/- | |

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the International filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the International filing date but later than the priority date claimed

- *T* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *&* document member of the same patent family

Date of the actual completion of the International search

3 December 2003

Date of mailing of the International search report

30/12/2003

Name and mailing address of the ISA
European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.
Fax: (+31-70) 340-3016

Authorized officer

Heiduschat, C

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/07605

| C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|--|--|-----------------------|
| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| Y | WO 96 11707 A (OREGON STATE) 25 April 1996 (1996-04-25) the whole document | 7-14, 21 |
| A | KUZYK M A ET AL: "ANTIGENIC CHARACTERIZATION OF THE SALMONID PATHOGEN PISCIRICKETTSIASALMONIS" INFECTION AND IMMUNITY, AMERICAN SOCIETY FOR MICROBIOLOGY. WASHINGTON, US, vol. 64, no. 12, December 1996 (1996-12), pages 5205-5210, XP001029511 ISSN: 0019-9567 page 5208, left-hand column, paragraph 3 —page 5209, left-hand column, last paragraph | 1-6, 15-20 |
| A | KOCH C ET AL: "16S RDNA STUDIES ON MEMBERS OF ARTHROBACTER AND MICROCOCCUS: AN AIDFOR THEIR FUTURE TAXONOMIC RESTRUCTURING" FEMS MICROBIOLOGY LETTERS, AMSTERDAM, NL, vol. 123, no. 1/2, 1994, pages 167-171, XP002066096 ISSN: 0378-1097 page 168, right-hand column, paragraph 2 page 170, left-hand column, paragraph 2 | 1-21 |
| A | GUDDING R ET AL: "Recent developments in fish vaccinology" VETERINARY IMMUNOLOGY AND IMMUNOPATHOLOGY, AMSTERDAM, NL, vol. 72, 1999, pages 203-212, XP002968601 ISSN: 0165-2427 page 207 —page 209 | 1-21 |
| A | JONES S R M: "THE EFFECT OF MICROBIAL EXTRACTS ON THE SEVERITY OF EXPERIMENTAL PISCIRICKETTSIA SALMONIS INFECTION IN COHO SALMON, ONCORHYNCHUS KISUTCH" DEVELOPMENTS IN BIOLOGICAL STANDARDIZATION, KARGER, BASEL, CH, vol. 90, 1997, page 430 XP009016791 ISSN: 0301-5149 the whole document | 1-21 |

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/07605

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 19 to 21 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-6, 15 -20

Invention I: Use of live Arthrobacter cells for the preparation of a medicament for treatment or prevention of piscirickettsiosis in fish, vaccine composition or kit comprising live Arthrobacter in combination with a *P. salmonis* antigen and use thereof for protection against SRS and BKD.

2. Claims: 7, 8, 14 (completely), 9-13 (partially)

Invention II: Vaccine composition comprising live Arthrobacter cell in combination with an immunostimulant, e.g. cell material from killed Arthrobacter cells, or a further, non specified, immunogen

3. Claims: 9-13 (all partially), 21

Invention III: Vaccine composition comprising cell material from killed Arthrobacter cells as immunostimulant, use of killed Arthrobacter cell material as immunostimulant for fish.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP 03/07605

| Patent document cited in search report | Publication date | | Patent family member(s) | Publication date |
|--|------------------|----------------------------------|--|--|
| WO 9833884 | A 06-08-1998 | AU EP WO US | 5773998 A 1012230 A1 9833884 A1 6627203 B1 | 25-08-1998 28-06-2000 06-08-1998 30-09-2003 |
| WO 9611707 | A 25-04-1996 | US AU CA GB NO WO | 5871751 A 4000195 A 2202499 A1 2308300 A ,B 971650 A 9611707 A1 | 16-02-1999 06-05-1996 25-04-1996 25-06-1997 06-06-1997 25-04-1996 |